

Claims

We claim:

1 1. A method of treating, reducing, or attenuating obesity in an individual comprising
2 the administration of therapeutically effective amounts of calcium to an individual and
3 inducing a metabolic change in said individual.

1 2. The method of claim 1, wherein said metabolic change is decreasing intracellular
2 calcium concentrations ($[Ca^{2+}]_i$), stimulating lipolysis, inhibiting lipogenesis, increasing the
3 expression of white adipose tissue uncoupling protein 2 (UCP2), reducing serum insulin
4 levels, thermogenesis, or decreasing the levels of calcitrophic hormones.

1 3. The method of claim 1, wherein said metabolic change is weight loss.

1 3. The method of claim 1, wherein said individual is maintained on a restricted
2 caloric diet.

1 4. The method of claim 1, wherein said calcium is contained in dairy products, a
2 dietary supplement, foodstuffs supplemented with calcium, or other foods high in calcium.

1 5. The method of claim 5, wherein said calcium is contained in salmon, beans, tofu,
2 spinach, turnip greens, kale, broccoli, waffles, pancakes, pizza, milk, yogurt, cheeses, cottage
3 cheese, ice cream, frozen yogurt, nutrient supplements, calcium fortified vitamin
4 supplements, or liquids supplemented with calcium.

1 6. A method of attenuating weight gain and adiposity in children, reducing the risk
2 of adiposity in children, or controlling weight gain in children comprising the administration
3 of therapeutically effective amounts of calcium.

1 7. The method of claim 6, wherein said individual is maintained on a restricted
2 caloric diet.

1 8. The method of claim 7, wherein said calcium is contained in dairy products, a
2 dietary supplement, foodstuffs supplemented with calcium, or other foods high in calcium.

1 9. The method of claim 8, wherein said calcium is contained in salmon, beans, tofu,
2 spinach, turnip greens, kale, broccoli, waffles, pancakes, pizza, milk, yogurt, cheeses, cottage
3 cheese, ice cream, frozen yogurt, vitamin supplements, or liquids supplemented with
4 calcium.

1 11. A method of diagnosis and treatment of obesity comprising the following steps:

- 2 a. determining the weight and, optionally, the height of an individual;
- 3 b. comparing the weight, or optionally the weight/height ratio, of the
4 individual to established norms;
- 5 c. optionally, classifying the obesity of the individual;
- 6 d. optionally providing the individual with information relating to the
7 benefits of maintaining a normal weight, or a normal weight/height
8 ratio; and
- 9 e. providing the individual with a dietary plan containing high levels of
10 calcium and, optionally printed matter disclosing the obesity-control
11 benefits of a high calcium diet.

1 12. The method of claim 11, further comprising providing said individual with food
2 products containing therapeutically effective amounts of calcium.

1 13. A computer implemented method of diagnosing, treating, and/or monitoring
2 obesity comprising the following steps:

3 a. determining the weight and, optionally, the height of an individual and
4 inputting these values into a computer system;

5 b. optionally calculating the weight/height ratio of the individual;

6 c. comparing the weight, or optionally the weight/height ratio, of the individual
7 to established norms contained in a weight and/or weight/height database
8 available to the computer;

9 d. optionally classifying the obesity of the individual;

10 e. optionally providing the individual with information relating to the benefits
11 maintaining a normal weight, or optionally a normal weight/height ratio; and

12 f. providing the individual a dietary plan containing high levels of calcium and,
13 optionally printed matter disclosing the obesity-control benefits of a high
14 calcium diet.

15 g. optionally monitoring the progress of the individual.

1 14. The method of claim 13, further comprising providing said individual with
2 dietary products containing therapeutically effective amounts of calcium.

1 15. A computer implemented methods of diagnosing, treating, and/or monitoring
2 obesity over a communication network comprising the following steps:

3 a. obtaining weight and, optionally, height data from an individual by input of
4 the data on a web page;

5 b. optionally calculating the weight/height ratio of the individual in a computer
6 connected to the Internet;

7 c. comparing the weight, or optionally the weight/height ratio, of the individual
8 to established norms contained in a weight and/or weight/height database
9 available to said computer;

10 d. optionally classifying the obesity of the individual;

11 e. optionally providing the individual with information relating to the benefits
12 maintaining a normal weight, or optionally a normal weight/height ratio; and

13 f. providing the individual a dietary plan containing high levels of calcium and,
14 optionally, information regarding the obesity-control benefits of a high
15 calcium diet.

1 16. The method of claim 15, further comprising providing said individual with
2 dietary products containing therapeutically effective amounts of calcium.

1 17. The method of claim 15, wherein said method further comprises the verification
2 of the inputted data.

1 18. An article of manufacture useful in stimulating the metabolic consumption of
2 adipose tissue containing foodstuffs and printed materials disclosing the advantages of high
3 calcium diets.

1 19. The article of manufacture of claim 18, wherein the printed materials are in the
2 form of pamphlets.

1 20. The article of manufacture of ~~claim 18~~, wherein printed material is embossed or
2 imprinted on the foodstuff and indicates the amounts of calcium contained within the
3 foodstuff, recommended levels of calcium intake necessary for the metabolically assisted
4 loss of adipose tissue, recommended BMI values, or recommended heights and weights for
5 individuals.

1 21. A method of modulating, attenuating, or decreasing obesity in an individual
2 comprising the administration of a 1, 25-dihydroxyvitamin D (1,25-(OH)₂-D) receptor
3 antagonist.

1 22. The method of claim 21, wherein said antagonist comprises an antibody.

1 23. The method of claim 21, wherein said antagonist is a chemical compound.

1 24. The method of claim 21, wherein said antagonist is 1- β ,25, dihydroxyvitamin
2 D.

1 25. A method of modulating, attenuating, or decreasing obesity in an individual
2 comprising the administration of a 1, 25-dihydroxyvitamin D (1,25-(OH)₂-D) antagonist.

1 26. The method of claim 25, wherein said 1, 25-dihydroxyvitaminD (1,25-(OH)₂-D)
2 antagonist is an antibody.

1 27. The method of claim 25, wherein said 1, 25-dihydroxyvitaminD (1,25-(OH)₂-D)
2 antagonist is a chemical compound.

1 28. The method of claim 25, wherein said compound contains calcium.

1 29. The method of claim 25, wherein said antagonist comprises one or more soluble
2 1,25-(OH)₂-D receptors.

1 30. A method for promoting the consumption of a calcium-containing product
2 wherein said method comprises the public distribution of information describing the obesity-
3 control benefits of said product which are attributable to the consumption of calcium in said
4 product.

1 31. The method, according to claim 30, wherein said distribution of said information
2 is achieved by a method selected from the group consisting of verbal communication,
3 pamphlet distribution, print media, audio tapes, magnetic media, digital media, audiovisual
4 media, billboards, advertising, newspapers, magazines, direct mailings, radio, television,
 electronic mail, braille, electronic media, banner ads, fiber optics, and laser light shows.

1 32. The method, according to claim 30, wherein said information pertains to a class
2 of products to which said calcium-containing product belongs.

1 33. The method, according to claim 32, wherein said class of products is dairy
2 products.

1 34. The method, according to claim 30, wherein said product is selected from the
2 group consisting of milk, cereals, and vegetables.